



Co-Organized By:



**INTERNATIONAL CONFERENCE ON  
TROPICAL STUDIES  
AND ITS APPLICATION**

**ABSTRACT  
BOOK  
2<sup>nd</sup> ICTROPS**

**Project Implementation Unit  
University of Mulawarman  
Islamic Development Bank 4in1 Project  
2018**

## **Abstract Book**

### **The 2<sup>nd</sup> International Conference on Tropical Studies and Its Application (ICTROPS) 2018**

**“Towards Sustainable Tropical Marine: A Holistic Approach for Welfare Development Indonesia”  
Copyright @2018**

Mulawarman University Press  
Jalan Kuaro, Gn. Kelua, Samarinda Ulu, Kota Samarinda, Kalimantan Timur 75119  
Indonesia

Editor:  
Fahrizal Adnan  
Reza Maulana Yusuf

Cover Design:  
Agung Yusuf

Chairman:  
Dewi Embong Bulan

## Schedule

<b>Tuesday, 18<sup>th</sup> September 2018</b>	
<b>Time (WITA)</b>	<b>Agenda</b>
07.30-08.00	<b>Registration</b>
08.00-09.00	<b>Opening Ceremony</b> Singing National Anthem "Indonesia Raya" Praying Welcoming speech from Rector of Mulawarman University
09.00-09.15	<b>Traditional Dance</b>
09.15-10.15	<b>Photo Session</b> <b>Plenary Session 1</b> Speaker: <i>Susi Pudjiastuti (Ministry of Marine Affairs and Fisheries)</i> Moderator: <i>Dr. Sc. Mustaid Yusuf, M.Sc.</i>
10.15-10.45	<b>MoU Signing of Unmul and KKP</b>
10.45-11.00	<b>Coffee Break</b>
11.00-12.00	<b>Plenary Session 2</b> Speaker: <i>Prof (emeritus) Tetsuo Yanagi (EMECS)</i> Moderator: <i>Dr. Anton Rahmadi, M. Sc.</i>
12.00-13.15	<b>Lunch Break</b>
13.15-14.15	<b>Plenary Session 3</b> Speaker: <i>Assoc. Prof. Dr. Suchana Apple Chavanich (Chulalongkorn University)</i> Moderator: <i>Widi Sunaryo, M.Si, Ph.D.</i>
14.15-14.30	<b>Sponsor Presentation by PT. Kramtekindo</b>
14.30-15.30	<b>Paralel Session for Oral Presentation 1</b>
15.30-16.00	<b>Coffee Break</b>
16.00-17.00	<b>Poster Presentation 1</b>
19.00-21.00	<b>Gala Dinner</b>
<b>Wednesday, 19<sup>th</sup> September 2018</b>	
07.30-08.00	<b>Registration</b>
08.00-09.00	<b>Plenary Session 4</b> Speaker: <i>Prof. Dr. Mitsuyasu Yabe (Kyushu University)</i> Moderator: <i>Prof. Dr. Enos Tangke Arung, S.Hut., M.P.</i>
09.00-10.00	<b>Panel session 1</b> Moderator: <i>Dr. Zeni Haryanto, M.Pd.</i> Speakers: 1. <i>Dr. Sri Rahayu Lestari, M.Si (State University of Malang)</i> 2. <i>Dr. Muh. Syahrir R, S.Pi., M.Si. (Mulawarman University)</i> Discussion
10.00-10.15	<b>Coffee Break</b>
10.15-11.15	<b>Panel session 2</b> Moderator: <i>Rudy Agung Nugroho, Ph.D.</i> Speakers: 1. <i>Hari Sulistyawati, Ph.D (Jember University)</i> 2. <i>Dr. Ririn Irnawati (Sultan Ageng Tirtayasa University)</i> Discussion
11.15-12.00	<b>Coaching Journal and Pararel Session for Oral Presentation 2</b>
12.15-13.15	<b>Lunch Break</b>
13.15-15.25	<b>Paralel Session for Oral Presentation 3</b>
15.25-16.00	<b>Coffee Break</b>
16.00-16.30	<b>Closing Ceremony</b>

## Oral Presentation Schedule

Tuesday, September 18 <sup>th</sup> 2018						
Session 1	Time	Ballroom 1	Ballroom 2	Meranti	Bengkirai	Bekapai
	14.30-14.40	OR-CMR-01	OR-MBE-01	OR-MBE-07	OR-MBT-01	OR-BEC-01
	14.40-14.50	OR-CMR-02	OR-MBE-02	OR-MBE-08	OR-MBT-02	OR-BEC-02
	14.50-15.00	OR-CMR-03	OR-MBE-03	OR-MBE-09	OR-MBT-03	OR-MCM-01
	15.00-15.10	OR-CMR-04	OR-MBE-04	OR-COM-01	OR-MBT-04	OR-MCM-02
	15.10-15.20	OR-CMR-05	OR-MBE-05	OR-COM-02	OR-MBT-05	OR-MCM-03
	15.20-15.30	OR-CMR-06	OR-MBE-06	OR-COM-03	OR-MBT-06	OR-MCM-04
Wednesday, September 19 <sup>th</sup> 2018						
Session 2	Time	Ballroom 1	Ballroom 2	Meranti	Bengkirai	Bekapai
	11.15-11.25	Journal Coaching				OR-MCM-05
	11.25-11.35					OR-MCM-06
	11.35-11.45					OR-MCM-07
	11.45-11.55					OR-MCM-08
Session 3	Time	Ballroom 1	Ballroom 2	Meranti	Bengkirai	Bekapai
	13.15-13.25	OR-EEC-01	OR-EEC-14	OR-SCL-06	OR-MNP-06	OR-MCM-09
	13.25-13.35	OR-EEC-02	OR-EEC-15	OR-SCL-07	OR-MNP-07	OR-MCM-10
	13.35-13.45	OR-EEC-03	OR-EEC-16	OR-SCL-08	OR-MNP-08	OR-MCM-11
	13.45-13.55	OR-EEC-04	OR-EEC-17	OR-SCL-09	OR-MNP-09	OR-MCM-12
	13.55-14.05	OR-EEC-05	OR-EEC-18	OR-SCL-10	OR-MNP-10	OR-MCM-13
	14.05-14.15	OR-EEC-06	OR-EEC-19	OR-SCL-11	OR-MNP-11	OR-MCM-14
	14.15-14.25	OR-EEC-07	OR-EEC-20	OR-SCL-12	OR-MNP-12	OR-MCM-15
	14.25-14.35	OR-EEC-08	OR-EEC-21	OR-SCL-13	OR-MNP-13	OR-MCM-16
	14.35-14.45	OR-EEC-09	OR-SCL-01	OR-MNP-01	OR-MNP-14	OR-MCM-17
	14.45-14.55	OR-EEC-10	OR-SCL-02	OR-MNP-02	OR-MNP-15	OR-MCM-18
	14.55-15.05	OR-EEC-11	OR-SCL-03	OR-MNP-03	OR-MNP-16	OR-MFP-01
	15.05-15.15	OR-EEC-12	OR-SCL-04	OR-MNP-04	OR-MNP-17	OR-MNP-19
15.15-15.25	OR-EEC-13	OR-SCL-05	OR-MNP-05	OR-MNP-18		

### Notes:

OR = Oral Presentation

PO = Poster Presentation

CMR = Coastal and Ocean Modeling and Remote Sensing

MBE = Marine Biodiversity and Evolution

COM = Coastal Management

MBT = Marine Biotechnology

BEC = Blue Economic

MFP = Marine and Fisheries Policy

MCM = Marine Conservation and Management

MNP = Marine Natural Products

SCL = Socio-Cultural and Law

EEC = Environmental and Ecology

Committee Room: Damar Meeting Room

## Oral Presentation List

No.	Code	Title	Author
<b>Coastal and Ocean Modeling and Remote Sensing</b>			
1	OR-CMR-01	Land Cover And Geomorphology Change Of Coastal Area Of Aceh Jaya Regency, Indonesia: Multi-Temporal Analysis Image Data Of 14 Years After Indian Ocean Tsunami	Sugianto
2	OR-CMR-02	Integrated Geophysical Methods used for Iron Ore Exploration in Tabalong District, South Kalimantan, Indonesia	Adrianus Inu
3	OR-CMR-03	Spatial Use Reorientation of Sebatik Island as Outer Small Islands	A Muh Hijaz Jalil
4	OR-CMR-04	Framework for Development of Borneo Biodiversity Information System	Edy Budiman
5	OR-CMR-05	Bayes Method Implementation on Expert System Application of Children Growth	Muhamad Azhari
6	OR-CMR-06	Spatial and Temporal Variability Analysis of Sea Level Anomaly in Eastern Indian Ocean from Altimetry Data	Julian Saputra
<b>Marine Biodiversity and Evolution</b>			
7	OR-MBE-01	Economic Valuation From Direct Used of Mangrove Forest Restoration in Balikpapan Bay, East Kalimantan	Abubakar M. Lahjie
8	OR-MBE-02	Structure of reef fish communities in Mahakam Delta, East Kalimantan, Indonesia	Muhammad Syahrir Ramang
9	OR-MBE-03	Identification and Abundance of Plankton at Coastal Waters of Tihik-Tihik Bontang As Cultivation Area of <i>Kappaphycus alvarezii</i>	Andi Nikhlani
10	OR-MBE-04	Coral Communities From Gaspar Strait, Bangka Belitung, Indonesia	Helmy Akbar
11	OR-MBE-05	Threat of Small Scale Capture Fisheries on the Fish Biodiversity in Seagrass Beds Bontang City, East Kalimantan	Aditya Irawan
12	OR-MBE-06	A Colonization of Artificial Reef by Fishes at Pangempang Waters Muara Badak, Kutai Kartanegara, East Kalimantan, Indonesia : A Preliminary Study	Iwan suyatna
13	OR-MBE-07	The Economic Role of Coral Reef Ecosystem to Fishermen's Income	Erwan Sulistianto
14	OR-MBE-08	Direct Use Value Economic Mangrove in Jenebora Sub-district, Balikpapan Bay	Rochadi Kristiningrum
15	OR-MBE-09	Epiphytic Biofilm on <i>Halodule uninervis</i> at Touristic area in Bali Island	Ni Luh Watiniasih
<b>Blue Economic</b>			
16	OR-BEC-01	The Comparison of Tillage Cost Among Eight Paddy Farm Regions in East Kalimantan, Indonesia	Karmini
17	OR-BEC-02	Analysis of Land Demand and Ponds Value Based on Land Rent Approach at Anggana Sub District in Kutai Kartanegara District	Etik Sulistiowati Ningih
<b>Marine Biotechnology</b>			
18	OR-MBT-01	Evaluation of Antimicrobial Activity of <i>Anadara Granosa</i> and <i>Achatina Fulica</i> Hydroxyapatites Against <i>Porphyromonas Gingivalis</i>	Silvia Anitasari

19	OR-MBT-02	Biomass and Lipid Productivities of A Newly Isolated Diatom ( <i>Melosira</i> sp IND-UHO-029) at Increasing Salinities	Indrayani
20	OR-MBT-03	Drought tolerance responses of purple sweet potato generated from callus organogenesis	Widi Sunaryo
21	OR-MBT-04	The effectiveness of adding Vitamin B5 and Vitamin C in the feed ration towards the growth of Gabus ( <i>Channa striata</i> ) seeds fish	Komsanah Sukarti
22	OR-MBT-05	Wood Degrading Ability and Inhibition of Fungal Growth of Isolated Fungus <i>Trametes</i> sp.	Erwin
23	OR-MBT-06	Temper: A Healthy Lotus Seed Tempe Innovation For Decreasing Soybean Import Dependency As An Effort for Local Food Self Sufficiency	Filza Sigit Pratama
<b>Coastal Management</b>			
24	OR-COM-01	The potential of 'Kelabau' Fish ( <i>Osteochilus melanopleura</i> Bleeker) gut bacteria from Melintang Lake East Borneo, Indonesia against fish pathogens	Agustina
25	OR-COM-02	Analysis of The Seasonal Impact on Isotopic Baselines of Dissolved Inorganic Carbon (DIC) in Coastal Waters Spermonde, South Sulawesi	Waode ode Rustiah
26	OR-COM-03	Optimatization of Bawis Fish ( <i>Siganus Canaliculatus</i> ) Resources as an Seagrass Endemic at Water Area Of Bontang City	Nurul Ovie
27	OR-MFP-01	The Development of the Indonesian Sector during the Reign of Jokowi: An Analytical Study of National Ocean Policy	Rahmah Daniah
<b>Marine Conservation and Management</b>			
28	OR-MCM-01	Study of Macrozoobenthos Density And Diversity On Artificial Coral Reef Made of Plastic Waste	Ma'ruf Kasim
29	OR-MCM-02	Complexities in The Establishment of Marine Conservation Area in East Kalimantan, Indonesia	Bambang Indratno Gunawan
30	OR-MCM-03	Analysis of the Bottom Sediment's Oxygen Demand in the Downstream River of Karang Mumus, in Samarinda City	Mursidi
31	OR-MCM-04	Conceptual Model of Marine Ecosystem Management Post Closure of Mining (Study of Tailings Disposal in Buyat Bay, Minahasa)	Djoko Hartoyo
32	OR-MCM-05	Planting trial design of Jelai ( <i>Hordenum vulgare</i> / <i>Coixlachryma jobi</i> / <i>Coix agrestis</i> ) as an initial Revegetation work of Coal Mined Lands	Triyono Sudarmadji
33	OR-MCM-06	The performance Evaluation of <i>hm.ardan</i> dam and <i>gang indra</i> Retention Pool due to the Tidal Effect in The Antasari Road Flood Control, Samarinda City	Tamrin
34	OR-MCM-07	The Legal Protection of Agricultural Land Sustainable Food in Mining Coal Area of East Kalimantan	Haris Retno Susmiyati
35	OR-MCM-08	Growth Response, Morphological and histological Changes of East Kalimantan local upland rice cultivars Exposed by extremely high aluminum stress condition	Nurhasanah
36	OR-MCM-09	The Identifications of Local Fruit Trees Diversity on Lembo to Food Security Suporting in Humid Tropical Area	Hadi Pranoto
37	OR-MCM-10	Ballast water management at inaport 4 <sup>th</sup> makasar based environmental risk assessment	Minto Basuki

38	OR-MCM-11	Industrial sector development, Urbanization, Fiscal policy and Environmental Degradation in Indonesia	Priyagus
39	OR-MCM-12	Relationship between soil texture and it's permeability on mined-out lands at East Kalimantan, Indonesia	Wahjuni Hartati
40	OR-MCM-13	Sustainability Of Ecosystem Mangrove In Conservation Area Adang And Apar Bay, East Kalimantan, Indonesia	Lambang Subagiyo
41	OR-MCM-14	Study Of Macrozoobenthos Density And Diversity On Artificial Coral Reef Made Of Plastic Waste	Ma'ruf Kasim
42	OR-MCM-15	Economic Management Model for Mangrove Ecosystem Area in Tanakeke, Talakar District, South Sulawesi	Auliansyah Nauap
43	OR-MCM-16	Sustainability Of Ecosystem Mangrove In Conservation Area Adang And Apar Bay, East Kalimantan, Indonesia	Lambang Subagiyo
44	OR-MCM-17	Abrasion In Derawan Island (The Cause And The Proper Solution)	Masjaya <sup>1</sup>
45	OR-MCM-18	Preliminary assessment of the potential yield of non-economic fish for supporting fish processing industry at Karangantu Fishing Port	in Irnawati
<b>Environmental and Ecology</b>			
46	OR-EEC-01	Expert System for Rice Plant Disease Diagnosed using Dempster Shafer Method	Fahrul
47	OR-EEC-02	The Correlation Between Diameter Increment Of Selected Tree Species And Climate Elements	Karyati
48	OR-EEC-03	Utilization Of aquatic Plants to Improve Water Quality of Fish Cages in Post Coal Mining Void: Laboratory Study	Guitarina
49	OR-EEC-04	Evaluation of Growth of Several Types of Energy Crops from Tropical Shrubs Species.	Dwi
50	OR-EEC-05	Risk Factors of Diphtheria Outbreak in Children aged 1-10 years in East Kalimantan Province of Indonesia	Iwan Muhamad Ramdan
51	OR-EEC-06	Aluminium Air Battery Using Rhodomyrtus Tomentosa Leaves Extract In Salt Water As Electrolyte	Mardiah
52	OR-EEC-07	Purification of used cooking oil by utilizing adsorbent derived from kepok banana and pineapple peel to support halal & clean production	Sulistyo Prabowo
53	OR-EEC-08	Organic Mulching for Control Erosion in Abandoned Land	Sri Sarminah
54	OR-EEC-09	Synthesis of Surfactant through Alcolysis Reaction bBetween Gliserin Trioleat and n-Amil Alcohol	Daniel
55	OR-EEC-10	Adsorption process of sulfonated carbon-derived from <i>Eichhornia crassipes</i> in the adsorption of methylene blue dye from aqueous solution	Mukhamad Nurhadi
56	OR-EEC-11	Microwave-assisted pretreatment of tropical woody biomass, <i>Paraserianthes falcataria</i> with silicomolybdic acid-H <sub>2</sub> O <sub>2</sub> system	Rudianto Amirta
57	OR-EEC-12	Association of thrombocytopenia with splenomegaly at malaria patients in East Kalimantan	Loly Rotua
58	OR-EEC-13	Quality of Air and Water Environment on Coal Mining Areas of PT. Insan Bara Perkasa in Kutai Kartanegara Regency and Samarinda City, East Kalimantan Province	Muhammad Fikri Hernandi

59	OR-EEC-14	Analysis of the Impact of Crude Oil Spills on Mangroves in Balikpapan in 2018	Ardiyansyah
60	OR-EEC-15	Optimal Thickness And Heating Time Based On Physical And Mechanical Properties Of Densified <i>Sengon</i> Board	Iskandar
61	OR-EEC-16	Determination on Edible Mushrooms Type and Growth Rate Using Fuzzy Method	Indah Fitri Astuti
62	OR-EEC-17	Effects of Anthropogenic Activity on Stream Water Quality in Langsa, Aceh	Helmy Akbar
63	OR-EEC-18	The Utilization Of Laundry Waste Water Processed By Ion Exchange Method For Hydroponic-Process Planting Media	Yeyen Maryani
64	OR-EEC-19	The Effect of Ratio of Water Level to Initial Fish Length on Growth and Feed Conversion Ratio of Rice Field Eel ( <i>Monopterus albus</i> ) Cultured in Media without Substrate	Muhammad Idris
65	OR-EEC-20	The Effect Of Concentration On The Adsorption Of Ethanol Extract Of <i>Syzygium Oleana</i> Shoot Leaf By Filter Paper	Iis Intan Widiyowati
66	OR-EEC-21	Humic Acid Modified Magnetite Nanoparticle And Its Application For Removal Of [AuCl <sub>4</sub> ]	Soerja Koesnarpadi
<b>Socio-Cultural and Law</b>			
67	OR-SCL-01	Stakeholder Perceptions towards Discourse Function Change of Sempu Island Nature Reserve, Malang	Nursya Arsa Sabila
68	OR-SCL-02	An Overview of Conflict in Fishing Community: Case study of Puger Fishing Village	Honest Dody Molasy
69	OR-SCL-03	The Legal Status Of Memorandum Of Understanding Determining The Land Demarcation Of The Sebatik Island Regions Between Indonesia And Malaysia In The Perspective Of The International Law	Dwi Ambarina
70	OR-SCL-04	Development of Small Business Management in the Fishery Product Processing Business Group in the Sanga-Sanga District Coastal Area	Gusti Haqiqiansyah
71	OR-SCL-05	Design of Red Dragon Fruit Processed Packaging Using Kansei Engineering	Iis Intan Widiyowati
72	OR-SCL-06	Living In Threats: Energy Insecurity Dimention In East Kalimantan, Indonesia	Uni Wahyuni Sagena
73	OR-SCL-07	Legal protection as a preventive efforts to remove damage to mangrove ecosystem	Siti Kotijah
74	OR-SCL-08	Criteria for Damage to Peat Ecosystems in the Environmental Law Perspective	Rosmini
75	OR-SCL-09	Prevention Of Sexual Violence In Children Through Teaching Personal Safety Skills	Farny Sutriany Jafar
76	OR-SCL-10	The Struggle of Shaman (Dukun) in Tengger for Maintaining Cultural Traditions : A Medical Anthropological Approach	Erwin Nur Rif'ah
77	OR-SCL-11	Development of a Student's contextual module based on Medicinal Plant Diversity and Ethnobotany as a Learning Resource	Rida Oktorida Khastini
78	OR-SCL-12	Potential Analysis Of Trach Fish As Raw Material Of Surimi In Lamongan District	Nita Kuswardhani
79	OR-SCL-13	Indonesian Traditional Fishing Right In Ashmore Reef Area An International Law Perspective	T. Annisa Febri Susanti



Marine Natural Products			
80	OR-MNP-01	Antimicrob of Nyirih ( <i>Xylocarpus granatum</i> ) Against Pathogen on Post Larva of Tiger Prawn	Gina Saptiani
81	OR-MNP-02	The Borneo herbal plants extracts as a natural medication for prophylaxis and treatment <i>Aeromonas hydrophila</i> and <i>Pseudomonas fluorescens</i> infection in Tilapia, <i>Oreochromis niloticus</i>	Esti Handayani Hardi
82	OR-MNP-03	Botanical and chemical profile of <i>Mitragyna speciosa</i> (korth.) Havil. And its effects on morphine-dependence mice behavior	Niken Indriyanti
83	OR-MNP-04	Analysis Of Local Plant Species Which Is Potential As An Antibacteria Based On All Of Ethnic Of Community Knowledge In Kutai Kartanegara District, Indonesia	Didimus Tanah Boleng
84	OR-MNP-05	Carrageenan Quality at Different Times of Harvesting from Bontang Coastal, East Kalimantan	Andi Noor Asikin
85	OR-MNP-06	Different temperature of drying modulates chemical and antioxidant properties of mandai cempedak ( <i>Artocarpus integer</i> )	Anton Rahmadi
86	OR-MNP-07	Spasmolytic Effect of <i>Curcuma aeruginosa</i> Extract on the Guinea-pig Isolated Trachea as Antiasthma	Swandari Paramita
87	OR-MNP-08	Hypocholesterolemic Effect of <i>Zingiber montanum</i> Extract in High Cholesterol Fed Wistar Rats	Swandari Paramita
88	OR-MNP-09	The Effect of Steaming Duration on Nutrition Composition, Glycemic Index And Load of Analog Rice From Natural Products East Kalimantan	Bernatal Saragih
89	OR-MNP-10	Edible Brown Seaweeds Of <i>Padina Australis</i> From North Sulawesi Coast As Source Of Natural Antioxidant	Chatrien A. Sinjal
90	OR-MNP-11	Antioxidant effect of Several <i>Macaranga</i> Tree extracts	Enos Tangke Arung
91	OR-MNP-12	Analysis of Pigment Composition and Pigment Content of Brown Seaweeds Collected from Sunset Beach, Karimunjawa Island, Indonesia	Heriyanto
92	OR-MNP-13	Phytochemical evaluation and Antioxidant Activity of <i>Tampoi</i> ( <i>baccaurea macrocarpa</i> )	Erwin
93	OR-MNP-14	Bioactivities of Ethanol Extract of Nek Kara ( <i>Dillenia excels</i> (Jack) Martelli ex. Gilg Leaves	Abdul Rasyid Zarta
94	OR-MNP-15	Potential Secondary Metabolites and Bioactivity in Matoa Fruit ( <i>Pometia pinnata</i> )	Heriad Daud Salusu
95	OR-MNP-16	Antibacterial Activity of Some Ferns from East Kalimantan, Indonesia	Reksi Sundu
96	OR-MNP-17	The Antidiabetic Potency of <i>Leea amabilis</i> Herb from East Borneo	Enih Rosamah
97	OR-MNP-18	Total phenolic and flavonoid contents of methanol extract of ihau ( <i>Dimocarpus longan</i> Lour. var. <i>malesianus</i> Leenh.) fruit peels and its biological and antioxidant activities	Sukemi
98	OR-MNP-19	Antibacterial Activity On Three Different Species Of Pasak Bumi From Palangkaraya, Central Kalimantan	S Silau

### Poster Presentation List

No.	Code	Title	Authors
1	PO-MBE-01	Economic Valuation of Mangrove Resources in Greasik Sub-district, North Penajam Paser District (PPU) of Balikpapan Bay	N Halimah
2	PO-MBE-02	Characteristics Target Strength of <i>Macrobrachium rosenbergii</i> De Man Using SIMRAD-EY 60	Widya Kusumaningrum <sup>1</sup>
3	PO-EEC-03	Utilization of Waste from Candlenut ( <i>Aleurites molucana</i> ) Shell as an Effective Adsorbent	Ratna Kusumawardani
4	PO-EEC-04	Effect Of Harvesting Time On Phenol Content of <i>Kappaphycus alvarezii</i> and <i>Gracilaria</i> sp From East Kalimantan	Indrati Kusumaningrum
5	PO-SCL-05	The spread of boat people in maritime area of southeast asia	Hary Primadi
6	PO-SCL-06	Addressing Non-Tradisional Threats in Maritime Border of Indonesia-Malaysia	Bagoes Rahmad Ekawahjoerihadi
7	PO-SCL-07	Study of Dayak Lundayeh Society's Game Animals at Mentarang River Basin in Malinau, North Kalimantan	Medi Hendra
8	PO-MNP-08	Evaluation of Phytochemical, Antioxidant And Antimicrobial Properties of <i>Litsea Angulata</i> Leaves Extract	Harlinda Kuspradini
9	PO-MNP-09	Evaporation and Vacuum deodorization affected the content of antioxidant in the oleic fraction of red palm oil and in its emulsion products	Bohari

OR -MBT-04

Effectiveness of adding Vitamin B5 and Vitamin C in the feed ration towards the growth of Gabus (*Channa striata*) seeds fish

Komsanah Sukarti\*, Isriansyah\*, dan M. Ma ruf\*

Program of Aquaculture, Faculty of Fisheries and Marine Science, Mulawarman University, Samarinda

#### Abstract

The aim of this study was to determine the effectiveness of feeding especially after adding vitamin B5 and vitamin C. Addition of vitamin B5 and Vitamin C is expected will increase the growth of fish seeds, reduce stress on the seeds, high survival rate and reduce maintenance time before going to the nursery. The study has used Completely Randomized Design (CRD) with 13 treatments (including 1 control treatment) and 3 times repeated. P1: 0 mg of vitamin, P2: 5 mg of vitamin B5, P3: 10 mg of vitamin B5, P4: 15 mg of vitamin B5, P5: 20 mg of vitamin B5, P6: 15 mg of vitamin C, P7: 30 mg of vitamin C, P8: 45 mg of vitamin C, P9: 60 mg of vitamin C, P10: 5 mg of vitamin B5 + 15 mg of vitamin C, P11: 10 mg of vitamin B5 + 30 mg of vitamin C, P12: 15 mg of vitamin B5 + 45 mg of vitamin C, P13: 20 mg of vitamin B5 + 60 mg of vitamin C. The results showed the addition of vitamin B5 and vitamin C in feed rations had significant effect on relative growth, daily growth rate and specific growth rate and weight of Gabus (*Channa striata*) seeds fish ( $P < 0.05$ )

Keywords: Vitamin B5, Vitamin C, feed ration, Gabus (*Channa striata*)

# Certificate of Appreciation

No: 0778 /UN17.45/LL/2018

Project Implementation Unit  
University of Mulawarman  
Islamic Development Bank 4in1 Project



This certificate is presented to  
Isriansyah

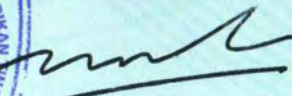
for participating as a PARTICIPANT at:

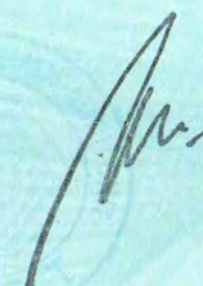
**2<sup>nd</sup> INTERNATIONAL CONFERENCE ON TROPICAL STUDIES AND ITS APPLICATION**

**“Towards Sustainable Tropical Marine :  
a Holistic Approach for Welfare Development of Indonesia”**

Balikpapan, East Kalimantan, Indonesia  
18-19<sup>th</sup>, September, 2018



  
**Prof. Dr. H. Masjaya, M.Si**  
Rector of Mulawarman University

  
**Dr. Sc. Mustaid Yusuf, M.Si**  
PIU IsDB Unmul, Executive Director